



A Member
of the
SARL



**Antique
Wireless Association
of Southern Africa**

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AWA Committee:

- * President—Don ZS5DR
- * Technical Advisor—Rad ZS6RAD
- * Net Controller—Willem ZS6ALL
- * Secretary/PRO—Andy ZS6ADY

#60

December 2010

Reflections:

5 years ago, when Rod, ZS5RK was President of the AWA, I approached him about doing a newsletter for the AWA. The ever diplomatic Rod, said to me, "If you want to do a newsletter, go ahead".

So 60 editions later, we are still at it. I must confess, there have been times when I have battled to get articles to fill the pages with and I have felt like just giving up. But then there have been the times when I have found many articles and been sent many articles and filling the pages has really been an easy job. I suppose that is one of the problems most small newsletter editors suffer with.

I must admit, the feedback I have had for most of the

newsletter editions that have gone out has been awesome. Maybe I'm just lucky or maybe those who don't like the newsletter just don't say anything, but I have had nothing but positive feedback for the 5 years I have been doing the newsletter. I really appreciate this and think it is probably one of the largest contributing factors this newsletter is still going today.

The first edition was in January 2006 and was 3 pages long.

There have been a few really good articles put forward by a few really good writers, and my thanks go to them too, for their support. Most of the articles I have had to research from websites, magazines etc and there

have never been any problems in getting author permission to re-publish articles.

All I can really say here is, thank you for all of the support I have received in publishing this newsletter. It really is a newsletter for you the members of the AWA and I hope it will always fill the gap with articles of interest for those of you who are serious about the maintenance and restoration of these fine old radio's. I have had great enjoyment in filling the pages and hope to be able to continue to fill them for many years to come.

Here's to the next five. May they be as fun filled as the first.

Best 73

De Andy ZS6ADY

Wikipedia—The Resistor

In precision applications it is often necessary to minimize electronic noise. As dissipative elements, even ideal resistors will naturally produce a fluctuating "noise" voltage across their terminals. This Johnson-Nyquist noise is a fundamental noise source which depends only upon the temperature and resistance of the resistor, and is predicted by the fluctuation-dissipation theorem. For example, the gain in a simple (non-) inverting amplifier is set using a voltage divider. Noise considerations dictate that the smallest practical resistance should be used, since the Johnson-Nyquist noise voltage scales with resistance, and any resistor noise in the voltage divider will be impressed upon the amplifier's output.

In addition, small voltage differentials may appear on the resistors due to thermoelectric effect if their ends are not kept at the same temperature. The voltages appear in the junctions of the resistor leads with the circuit board and with the resistor body. Common metal film resistors show such an effect at a magnitude of about $20 \mu\text{V}/^\circ\text{C}$. Some carbon composition resistors can go as high as $400 \mu\text{V}/^\circ\text{C}$, and specially constructed resistors can go as low as $0.05 \mu\text{V}/^\circ\text{C}$. In applications where thermoelectric effects may become important, care has to be taken (for example) to mount the resistors horizontally to avoid temperature gradients and to mind the air flow over the board.

Practical resistors frequently exhibit other, "non-fundamental", sources of noise, usually called "excess

(Continued on Page 7)

CW Activity:

Activity has been fair this past month. 40m has been in fairly good condition by late afternoons when the CW net has been on resulting in a good few contacts being made.

The CW section of the SARL 80m Club Championships was held on the 24th of November and there was a also a reasonable amount of activity. Although conditions on 80m in the evenings has not been that great, there were certainly a good few contacts made. Unfortunately short skip was predominant so contacts out of Div 6 were not that forthcoming, although I did hear a few Div5 stations on the band.

I have noticed a lot of CW DX stations on 40 late evenings, although I haven't tried my hand at answering any of the calls, WPM, which is a bit beyond my capabilities.

News from Barry ZS6AJY is the QRP

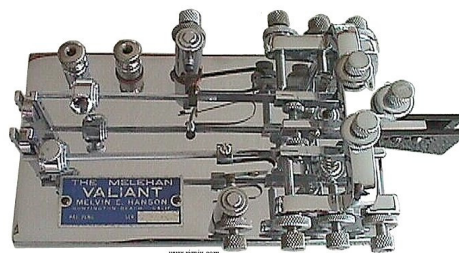
group which meet every morning on 3579, are still enjoying good conditions and good signals. This ardent group of QRP'rs have been going for many years.

I received an email from John ZS6JBJ in Witbank in response to my comments about CW in the last newsletter and have put his reply on Page 4. Thanks John.

Ian ZL2AIM also sent a reply to my comments. He wrote as follows:

"I got out both my logbooks ZS5IAN and ZL2AIM and did a comparison. I was shocked by the results. I had worked CW with 125 stations in ZS compared to only 83 in ZL. This was broken down as follows

ZS1	17
ZS2	7
ZS3	1
ZS4	7
ZS5	32
ZS6	61



TOTAL 125 ZS stations worked" .

Ian also mentioned however, that the ZL stations he heard a lot more regularly than what he heard the ZS stations. Many of the ZS stations he had cajoled into having a contact with himself.

Just goes to show then. I am not always right.

Best 73,

De ZS0AWA ... --

SSB Activity:

The bands have been really quite active over this last period and 40m has certainly been providing a lot of entertainment in the form of DX stations from Europe and US coming in with good Q5 signals.

Guys have been working them on long wire antenna's to beam antenna's with good results all around.

Not only has 40m been doing well, but even the other bands have been quite active. I had a QSO with a F6 station at about 18:30 in the evening on 20m using an inverted V at 6m. Q5 sigs both ways.

The SSB net on Saturday mornings has been

well attended of late and conditions have generally been good on 40m. 80m seems to have gone out by the time the SSB net starts on a Saturday and 40m must really be the band of choice these days.

I have not been around for all the SSB nets and therefore we have not been relaying on to 80m, but as I say, 40m has been so good.

Even Dave, running ZS6MUS without any changes to his antenna system, has been giving us Q5 reports on 40m. We never used to be able to hear Dave on 40m and even battled on 80m.

I don't know if anyone is really prepared to

say what is going to happen on the bands and whether these good conditions will prevail, but lets take advantage of them while we can.



Geloso G212

AM:

The AM nets have not been very productive these last few weeks as conditions on 80m are now like 40m used to be. Saturday mornings are still the best time for the AM net, but seems to only favour local stations the best.

The div 6 stations all report good 5/9 plus signals, while the div 5 stations are sometimes battling with low signals and noise mostly from local sources.

Wednesday evening nets are really a "no,no" as conditions in the evening are really not that good. Although we have not had many of the dreaded Highveld thunderstorms this year, the band is really not in a good condition and the QRN just drowns out any AM

signals. SSB has proved to be usable as Don and myself have resorted to using SSB instead of AM in order to hear each other.

The Yaesu FR50B is in div 6 and we will have the draw for this radio, live, on the SSB net on Saturday 18 December. So if you have sent in a report of the AM net, or reported in yourself on the AM net or on SSB after the net, you stand in line to win this beautifully restored receiver.

So the last opportunity you have to get your name on the list, will be the Saturday morning of the 18th. Listen in to the AM net and either call in on AM to give a report or check in on SSB directly after the net. Who knows, it may just have your name written on it.

There have been a bunch of regular supporters on the AM net and to each of you, we say thank you. It certainly has been good running the net and having you all there. Unfortunately we only have one radio to give away, otherwise we would give you each one.



Yaesu FR50B Rx

AWA PRESIDENTS REPORT FOR 2010



My how this year has flown by and as I sit here and reflect back while sailing from Sierra Leone to Ghana on a Drill Ship I am sure you must agree that it has certainly been busy for the AWA.

I promised Andy I would give him a quarterly report well that never hap-

pened and I apologise, work commitments and moving QTH have taken all the spare time I have but at least I was able to get my Temporary station set-up at my New QTH and I am on the Air for now.

I would like to thank Andy and Rad for their support and hard work over the passed year without which the AWA would not have run as smoothly as it has.

This year has seen its challenges with band conditions the way they have been, Andy's 80m relays on a Saturday morning have been a success and always good as a backup, being able to bring in the chaps battling on 40 and the division 4 stations who have not been able to copy on 40 due to the skip zone. Mind you the passed few weeks have seen 40 wake up and good comms have been had country wide on the 40 meter SSB net.

Thanks to Willem, Andy and Rad for running the various Nets on SSB, AM and CW which has kept the interest going this passed year and we have had great fun using our old antique radio's on these nets.

We have been fortunate enough to receive quite a few donations this passed year and to all those who donated equipment and spares Thank You and Thank You again.

We do not charge membership fees and these donations have helped keep the AWA going.

Thanks to Rad for attending quite a few Flee markets and Swop shops with a boot full of goodies for grabs and the proceeds going to the AWA.

Our Annual gathering at the TAC went well with quite a few members in attendance and a sizeable flea market with a few bakkie and trailer loads of equipment up for grabs. I even came away with a receiver for my Son Cuan who was delighted to get it. More on the receiver later...

December will be our News letters 60th edition which means 5 years running and I must say many thanks to Andy for all his hard work and dedication in producing one of the finest Club Newsletters around.

Over the last five years we have seen the monthly newsletter go from strength to strength and Andy's commitment has been commendable, the format has changed a few times over the years as Andy has found new ways to Edit and compile the newsletter to what it is today. I must admit I can't wait each month to see the email from Andy with the Newsletter attached, it always takes priority opening and reading.

Thank you to those hams who have contributed articles over the years it always helps to fill the gaps and make for good reading. Keep it up and we will be able to enjoy the newsletter for years to come. Thank you Andy.

The AWA has been doing quite well in the Club contest so keep it up and we can at least get our Club on the board.

Our own AWA QSO parties have gone off well with quite a few members joining in but not so many logs received.

Well done to all those who participated and thank you for joining in on the fun.

Remember the QSO Parties are there to encourage us to use the old sets and get on the air to say hi to fellow amateurs using antique radios, there is more than enough time to have a chat and be able to get most operators logged down. Come and join us next time the QSO Party is on.

Its time again for electing a President so please put forward any nominations you may have, we are trying to work out the best location for the AWA AGM but we may just have to do it on air if a suitable location is not available.

Former Presidents : Cliff ZS6BOX, Bushy ZS6M (SK), Rod ZS5RK now ZL1RK, Andy ZS6ADY, Gary ZS5NK, Rad ZS6RAD.

Back to the Receiver story...

Before giving the receiver to Cuan I decided to test it first just to make sure all was OK. I connected the antenna and power and hey presto it sprang to life. This was great as with my busy schedule I did not have the time to run it through an alignment. Well all was well until I had to use the antenna for another receiver for an AM evening. I disconnected the antenna and carried on with the AM session, during the evening I decided to turn on the receiver to see what it sounded like while playing an MF. Well all was ok until I touched the chassis and found with surprise that I was now a few feet from where I had been standing !! Oh how quickly came out the volt meter only to find the chassis was live with 220 VAC. I must tell you that no sympathy was given on the net for the new hair style I had just acquired, just a few chuckles and acknowledgement Now I wonder if that has happened to anyone else before..... Thank goodness I did not give the rig to Cuan like that.

Now some advice to all you guys with old equipment. Please make sure you have a 3 core power cable with the Earth connected to the chassis or a separate Earth connected from the chassis of the rig to ground, this at least will make sure that You do not become that conductor to earth, apart from the new hair style you may come away with, a shock like that really hurts and you find muscles you thought you never had appear and ache for days not to mention that it might do you in if it is a bad shock. I found that the 0.1 uF caps across the input of the transformer to ground were leaky so they were promptly removed.

Well lets hope the next year brings us lots of happy operating using our antique equipment.

The festive season is upon us and if you are travelling don't forget to take your portable rigs with, you may never know if or when they may be needed in an emergency.

If you are listening and hear somebody calling CQ go back to the call it will only take a few minutes of your time. It may be that stations first QSO and it will be your call sign on the first page of his or her log.

Best 73

Don Radford ZS5DR

President SA AWA

CW ACTIVITY

JOHN ZS6BJJ



I'm the least qualified person to be contributing anything to a respected organisation like the Antique Wireless Association.

My faithful 14 year old Icom 706 Mk1 great though it is cannot be considered "Antique"

I am not technically minded, subjects discussed by the real fundi's in AWA nets sound like recipes for koeksusters to me.

Essential requirement for soldering work are fully charged fire extinguishers on stand by.

My "accurate length "home brew antennas need several days trimming before they work..

Even though licensed for 14 years my family decided an appropriate Christmas present would be a book named "Ham Radio for Dummies"

Great CV for a hobby so full of technology. Am I alone out there?

Luckily our hobby has many other things to offer which brings us to Morse code. Advantages of simple antennas, needs little power and gets through when signals are weak. Above all it is fun. Quote from a German QSL card "Without CW it's just Citizen Band"

I must thank OM Andy ZS6ADY who year after year in the AWA CW net has tried to keep CW alive. The numbers reporting in may be small Andy but all of us appreciate your efforts. Sadly ZS stations operating CW mode both locally and DX are rapidly declining. Getting a response to a CQ seldom happens these days. We probably live in the only country in the world where being so few, the majority of internal CW operators are known to each other.

In December 1996 I passed the 12wpm code test. Constructive criticism after test was "you are using the key like a doorknocker" My first CW contact was with OM Helgie ZS6HB in 1998. What a nerve racking experience. Between encouragement from Helgie and the grand old man of Morse Code OM Mossie ZS4XJ it slowly started to get more enjoyable and now I am totally hooked. I seldom bother to plug the microphone in now.

It's my personal opinion that local CW contests do little in keeping this mode alive, so many operators take part then are not heard again until the next contest. What a pleasure it would be to hear them call in now and again on the AWA CW net to give Andy the support he so richly deserves, is that too much to ask for?

Being retired I do have time to monitor the bands for signs of activity. I enjoy DXing. From 7th to 12th November I can report on following.

The 10 metre band is definitely improving in the afternoon, although I limit power to 50 watts I have been making contact with stations in Europe, on 11th November 5 contacts into USA around 17:00 UTC. Signal reports were around 559. This band when really open is excellent for qrp. I did hear OM Fanie ZS6 NJ in qso with a Portuguese station here. I always listen to the CB pirate frequency 27.555 MHz first, if there is activity there try a CQ on ten metres.

21 metres has been active during daylight hours. Stations in Europe coming through with fair to good signals

14 Metres has been best in late afternoon to evening, for those who prefer slower morse try 14.050 MHz, this is the frequency where members of the Straight Key Century Club (SKCC) can be heard. They do run a monthly competition, a ZS station getting through in that contest usually causes quite a stir. Membership of SKCC is free. Like Fists it is there to promote CW using a straight key. More info is available on internet, look up SKCC. SKCC also awards certificates to its members who have a ragchew on CW mode using a straight key lasting more than an hour.

Recently I read what was claimed to be the origins of "Ragchew". The phrase "chewing the rag" was well known back in the late Middle Ages. "Chew" was a slang word for talk whilst "rag" is derived from fat or a reference to the tongue. Chewing the rag meant having a conversation whilst sitting down round the table for a meal. Any other theories?

73

De John

ZS6BJJ

Mail from Ian ZL2AIM (ZS5IAN)

Hi Andy – and as usual thanks for the newsletter.

Re CW, you wrote “Now I know that is a bit of a general statement, and Pierre will probably want to roast me, but there really are not many SA hams on CW any more. Maybe I am wrong, and please, prove me so if you wish, but this is really my perception of CW on our bands here.”

So I got out both my logbooks ZS5IAN and ZL2AIM and did a comparison. I was shocked by the results. I had worked CW with 125 stations in ZS compared to only 83 in ZL. This was broken down as follows

ZS1	17
ZS2	7
ZS3	1
ZS4	7
ZS5	32
ZS6	61

TOTAL 125 ZS stations worked

I must admit that some of those ZS5 stations were stations that only worked me on CW because I cajoled them into working me. Some were at about 4 wpm but I just wanted to get them on the air using CW. Chances are that about 10 of those ZS5 station would not ever be heard again on CW.

ZL1	27
ZL2	40
ZL3	11
ZL4	4
ZL5	Antarctica
ZL6	1

TOTAL 83 ZL stations worked.

The strange thing is even with me having worked fewer stations in ZL, the ZL stations that I have worked are definitely more active on the bands compared to when I lived in ZS and very few ZS stations were heard on the bands. Unfortunately with my working hours in ZL as they are (I work most weekends) that I don't get a chance to work a lot of the local contests. Had I have been able to do so, then the ZL numbers would be much higher.

Just for the fun of it, I looked at VK stations and see that I worked on CW

VK1	4
VK2	36
VK3	22
VK4	27
VK5	7
VK6	1
VK7	6
VK8	1
VK9	1

Total 105 VK CW stations worked.

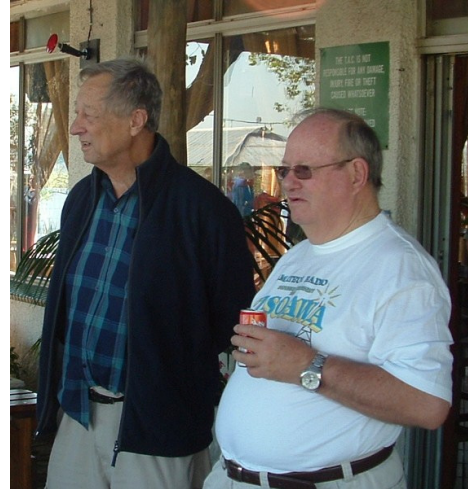
So to go back to your original statement I would agree with you based on my listening in ZS 3 years ago. If I look at the list of ZS stations worked on CW, very very few were repeatedly active on the bands. What a pity.

Ian

Past Presidents



Bushy ZS6M (SK) 2004



Gary ZS5NK 2007—Cliff ZS6BOX 2003



Rod ZS5RK 2005—Andy ZS6ADY 2006



Rad ZS6RAD 2008—2009



Don ZS5DR—2010

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noise." Excess noise results in a "Noise Index" for a type of resistor. Excess Noise is due to current flow in the resistor and is specified as $\mu\text{V}/\text{V}/\text{decade}$ - μV of noise per volt applied across the resistor per decade of frequency. The $\mu\text{V}/\text{V}/\text{decade}$ value is frequently given in dB so that a resistor with a noise index of 0 dB will exhibit 1 μV (rms) of excess noise for each volt across the resistor in each frequency decade. Excess noise is an example of $1/f$ noise. Thick-film and carbon composition resistors generate more noise than other types at low frequencies; wire-wound and thin-film resistors, though much more expensive, are often utilized for their better noise characteristics. Carbon composition resistors can exhibit a noise index of 0 dB while bulk metal foil resistors may have a noise index of -40 dB, usually making the excess noise of metal foil resistors insignificant.^[17]

Thin film surface mount resistors typically have lower noise and better thermal stability than thick film surface mount resistors. However, the design engineer must read the data sheets for the family of devices to weigh the various device tradeoffs.

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**Antique Wireless Association
of Southern Africa**

Mission Statement

Our aim is to facilitate, generate and maintain an interest in the location, acquisition, repair and use of yester-days radio transmitters and receivers. To encourage all like minded amateurs to do the same thus ensuring the maintenance and preservation of our amateur heritage.

Membership of this group is free and by association.

Notices:**For Disposal:**

I still have in my possession a Trio model JR60 receiver which was donated to the AWA. It is in need of some TLC as the dial indication is completely wiped off the glass front. Anyone wanting a good challenge of restoration or spares can contact me and I will send photo's etc.

Andy ZS6ADY—0824484368 or email

NET TIMES AND FREQUENCIES:

The following are times and frequencies for the AWA nets:

AM Net—Wednesday evenings from around 18:30: Saturday mornings from around 06:00 or when band conditions allow. Frequency—3615.

SSB Net—Saturday mornings from 08:30. Frequencies—7070 with a relay on 3615.

CW Net—Saturday afternoon from 14:00. Frequency—7020.
(Times given are CAT or SAST)
